

AMENDMENT UNDER 37 C.F.R. §1.114(c)
Application Number 09/2887,264

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (CANCELLED)
2. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said de-activation includes performing said algorithm with a relatively higher repetition period.
3. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said de-activation includes performing a different algorithm instead.
4. (ORIGINAL) A method according to claim 3, wherein said algorithm and said other algorithm are chosen in a group comprising closed-loop power control algorithms and open-loop power control algorithms.
5. (PREVIOUSLY PRESENTED) A method according to claim 21, comprising:
 - regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated, when activated, or activated, when de-activated,
 - de-activating, or activating, said power control algorithm if the corresponding criterion is met.
6. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein provision is made not to de-activate, or activate, said algorithm too frequently.

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7. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality.

8. (PREVIOUSLY PRESENTED) A method according to claim 7, wherein said estimation as to whether said criterion is met includes:

- an estimation of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given time-interval on which said deviation value is estimated,

- an estimation of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,

- a choice between activation and de-activation of said algorithm depending on which of said first and second deviation values is the lowest.

9. (PREVIOUSLY PRESENTED) A method according to claim 7, wherein said estimated transmission quality is represented by an estimated signal-to-interference ratio.

10. (PREVIOUSLY PRESENTED) A method according to claim 7, wherein said estimated transmission quality is represented by a received signal power.

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11. (PREVIOUSLY PRESENTED) A method according to claim 7, wherein said estimated deviation value is represented by the variance of said estimated transmission quality.

12. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said method is performed in the uplink transmission direction of said mobile radiocommunication system.

13. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said method is performed in the downlink transmission direction of said mobile radiocommunication system.

14. (PREVIOUSLY PRESENTED) A method according to claim 21, wherein said mobile radiocommunication system is of CDMA type.

15. (PREVIOUSLY PRESENTED) A mobile radiocommunication network entity, comprising, for performing a method according to claim 21, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

16. (CURRENTLY AMENDED) A mobile station, comprising, for performing a method according claim 21, in the uplink transmission direction of a mobile radiocommunication system:

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- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

17. (PREVIOUSLY PRESENTED) A mobile station, comprising, for performing a method according to claim 21, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

18. (CURRENTLY AMENDED) A mobile radiocommunication network entity, comprising, for performing a method according to claim 21, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

19. (CANCELLED)

20. (CANCELLED)

21. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:
regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and

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de-activating said power control algorithm if said criterion is met,
wherein said estimating step includes:
an estimation of performance of said system with said power control
algorithm activated;
an estimation of performance of said system with said power control
algorithm de-activated; and
making a choice between activating and de-activating said algorithm
based on said estimating step.

22. (CANCELLED)

23 (CANCELLED)

24. (CANCELLED)

25. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile
radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control
algorithm should better be de-activated; and

de-activating said power control algorithm if said criterion is met,
whercin said estimating step includes:

an estimation of performance of said system with said power control algorithm
de-activated; and

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making a choice between activating and de-activating said algorithm based on said estimating step.

26. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated,

de-activating said power control algorithm if said criterion is met,

wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality, and

wherein said estimation as to whether said criterion is met includes:

an estimation of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given time-interval on which said deviation value is estimated,

an estimation of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,

a choice between activation and de-activation of said algorithm depending on which of said first and second deviation values is the lowest.

27. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

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regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated,
de-activating said power control algorithm if said criterion is met,
wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality, and wherein said estimated deviation value is represented by the variance of said estimated transmission quality.

28. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and
de-activating said power control algorithm if said criterion is met,
wherein said de-activation includes performing a different type of algorithm than said power control algorithm, and
wherein said different type of algorithm includes an algorithm showing better performances than said algorithm in fast changing environments and/or high mobile speed.

29. (PREVIOUSLY PRESENTED) A method according to claim 28, comprising:

- regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated, when activated, or activated, when de-activated,

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- de-activating, or activating, said power control algorithm if the corresponding criterion is met.

30. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein provision is made not to de-activate, or activate, said algorithm too frequently.

31. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality.

32. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:
regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and

de-activating said power control algorithm if said criterion is met,
wherein said de-activation includes performing a different type of algorithm than said power control algorithm,

wherein said algorithm and said other algorithm are chosen in a group comprising closed-loop power control algorithms and open-loop power control algorithms, and

wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality, and

wherein said estimation as to whether said criterion is met includes:

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- an estimation of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given time-interval on which said deviation value is estimated,
- an estimation of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,
- a choice between activation and de-activation of said algorithm depending on which of said first and second deviation values is the lowest.

33. (PREVIOUSLY PRESENTED) A method according to claim 31, wherein said estimated transmission quality is represented by an estimated signal-to-interference ratio.

34. (PREVIOUSLY PRESENTED) A method according to claim 31, wherein said estimated transmission quality is represented by a received signal power.

35. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and

de-activating said power control algorithm if said criterion is met,
wherein said de-activation includes performing a different type of algorithm than said power control algorithm,

wherein said algorithm and said other algorithm are chosen in a group comprising closed-loop power control algorithms and open-loop power control algorithms, and

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wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality, and wherein said estimated deviation value is represented by the variance of said estimated transmission quality.

36. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said method is performed in the uplink transmission direction of said mobile radiocommunication system.

37. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said method is performed in the downlink transmission direction of said mobile radiocommunication system.

38. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said mobile radiocommunication system is of CDMA type.

39. (PREVIOUSLY PRESENTED) A mobile radiocommunication network entity, comprising, for performing a method according to claim 28, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

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40. (CURRENTLY AMENDED) A mobile station, comprising, for performing a method according claim 28, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

41. (PREVIOUSLY PRESENTED) A mobile station, comprising, for performing a method according to claim 28, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

42. (CURRENTLY AMENDED) A mobile radiocommunication network entity, comprising, for performing a method according to claim 28, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

43. (PREVIOUSLY PRESENTED) A method according to claim 28, wherein said power control algorithm is one of a closed loop and open loop algorithm, and said different type of algorithm is the other of said closed loop or open loop algorithm.

44. (CANCELLED)

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45. (CANCELLED)

46. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:

regularly estimating whether a criterion is met as to whether said power control algorithm should better not be performed, and

not performing any power control algorithm in accordance with a result of said estimating step,

wherein said estimation as to whether said criterion is met is based on an estimation of a deviation value, representative of a deviation between an estimated transmission quality and a target transmission quality.

47. (PREVIOUSLY PRESENTED) A method according to claim 46, wherein said estimation as to whether said criterion is met includes:

- an estimation of a first deviation value, which would have been obtained if said power control algorithm had always been activated, on a given time-interval on which said deviation value is estimated,

- an estimation of a second deviation value, which would have been obtained if said power control algorithm had never been activated, on said given time-interval on which said deviation value is estimated,

- a choice between activation and de-activation of said algorithm depending on which of said first and second deviation values is the lowest.

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48. (PREVIOUSLY PRESENTED) A method according to claim 46, wherein said estimated transmission quality is represented by an estimated signal-to-interference ratio.
49. (PREVIOUSLY PRESENTED) A method according to claim 46, wherein said estimated transmission quality is represented by a received signal power.
50. (PREVIOUSLY PRESENTED) A method according to claim 46, wherein said estimated deviation value is represented by the variance of said estimated transmission quality.
51. (CANCELLED)
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58. (PREVIOUSLY PRESENTED) A method for improving performances of a mobile radiocommunication system using a power control algorithm, said method comprising:
regularly estimating if a criterion is met as to whether said power control algorithm should better be de-activated; and
de-activating said power control algorithm if said criterion is met,
wherein said de-activation includes performing a different type of algorithm than said power control algorithm,
wherein said algorithm is one of a closed loop power control algorithm and a open loop power control algorithm and said other algorithm is the other of said closed loop power control algorithm and said open loop power control algorithm.

59. (CANCELLED)

60. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 25, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

61. (NEW) A mobile station, comprising, for performing a method according to claim 25, in the uplink transmission direction of a mobile radiocommunication system:
- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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62. (NEW) A mobile station, comprising, for performing a method according to claim 25, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

63. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 25, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

64. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 26, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

65. (NEW) A mobile station, comprising, for performing a method according to claim 26, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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66. (NEW) A mobile station, comprising, for performing a method according to claim 26, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

67. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 26, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

68. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 27, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

69. (NEW) A mobile station, comprising, for performing a method according to claim 27, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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70. (NEW) A mobile station, comprising, for performing a method according to claim 27, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

71. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 27, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

72. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 32, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

73. (NEW) A mobile station, comprising, for performing a method according to claim 32, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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74. (NEW) A mobile station, comprising, for performing a method according to claim 32, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

75. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 32, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

76. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 35, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

77. (NEW) A mobile station, comprising, for performing a method according to claim 35, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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78. (NEW) A mobile station, comprising, for performing a method according to claim 35, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

79. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 35, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

80. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 46, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

81. (NEW) A mobile station, comprising, for performing a method according to claim 46, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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82. (NEW) A mobile station, comprising, for performing a method according to claim 46, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

83. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 46, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.

84. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 58, in the uplink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile station.

85. (NEW) A mobile station, comprising, for performing a method according to claim 58, in the uplink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile radiocommunication network entity, provided according to said method.

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86. (NEW) A mobile station, comprising, for performing a method according to claim 58, in the downlink transmission direction of a mobile radiocommunication system:

- means for performing said method,
- means for sending corresponding power control commands to a mobile radiocommunication network entity.

87. (NEW) A mobile radiocommunication network entity, comprising, for performing a method according to claim 58, in the downlink transmission direction of a mobile radiocommunication system:

- means for receiving power control commands from a mobile station, provided according to said method.